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ADC INTERCEPTER INSTRUMENTATION

1. Recording of airborne radar information by means of photographic film and/or magnetic media is desirable.
2. All timing devices used on the interceptor should be synchronized with WWV prior to test activities. Radar data recordings should include the synchronized time of day information.
3. The F-104 interceptors will be equipped with side-winder type captive missiles during all power climb and snap up intercepts.
4. Documentation - Interceptor pilots will complete the ADC "Controller/Interceptor Report" as accurately as possible. Particular attention will be given as to the specific Time of Day and Range to Target when the afterburner is ignited.

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GROUP 1  
Excluded from automatic  
downgrading and  
declassification

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ADC Vectoring Facility Instrumentation Requirements

1. Time Correlation: All data shall contain time information having one (1) second resolution (or better resolution if possible) and synchronized with WWV prior to each test series.
2. Test bed position (geo).
3. Interceptor(s) position(s) (geo).
4. Range - test bed to interceptor(s).
5. Test bed heading.
6. Interceptor(s) heading(s).
7. Test bed speed.
8. Interceptor(s) speed(s).
9. Test bed altitude.
10. Interceptor(s) altitude(s).
11. Aircraft identification.
12. Voice recording of all communications on 1/4" magnetic tape.
13. Data printout (hard copy) - It is required that hard copy data, be available by 0800 on the day following each test.
14. These provisions are required during all target detection tests.

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Sortie Number AB-1A

I. Test Bed Requirements

- A. Altitude: approximately 70,000 ft.
- B. Velocity: normal cruise.
- C. Course: straight and level.

II. Interceptor Requirements

- A. Altitude: approximately 40,000 ft.
- B. Velocity: supersonic.
- C. Engine Mode: afterburning.
- D. Initiation of run: at least 30 miles aft of test bed.
- E. Course: identical to and directly under that of test bed.
- F. Termination of run: terminate as interceptor passes under test bed.

III. Number of Sorties Required by Aircraft Type

- A. One (1) F-104.
- B. One (1) F-106.
- C. One (1) other type i.e., F-4, F-101 or F-111.

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Sortie Number: AB-2A

I. Test Bed Requirements

- A. Altitude: approximately 70,000 ft.
- B. Velocity: normal cruise.
- C. Course: straight and level.

II. Interceptor Requirements

- A. Altitude: approximately 40,000 ft.
- B. Velocity: supersonic.
- C. Engine mode: afterburning.
- D. Initiation of run: directly under test bed.
- E. Course: test bed course plus (+) 180 degrees.
- F. Termination of run: to be determined during run.

III. Number of Sorties Required by Aircraft Type

- A. One (1) F-104.
- B. One (1) F-106.
- C. One (1) Other Type i.e., F-4, F-101, or F-111.

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Sortie Number: AB-3A

I. Test Bed Requirements

- A. Altitude: approximately 70,000 ft.
- B. Velocity: normal cruise.
- C. Course: straight and level.

II. Interceptor Requirements

- A. Altitude: approximately 40,000 ft.
- B. Velocity: supersonic.
- C. Engine mode: afterburning.
- D. Initiation of run: approximately 10 miles aft of test bed with 15 mile offset.
- E. Course: test bed course plus (+) or minus (-) 90 degrees.
- F. Termination of run: termination to be determined during test.

III. Number of Sorties Required

- A. Two (2) F-104's.

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Sortie Number: AB-1B

I. Test Bed Requirements

- A. Altitude: Approximately 70,000 ft.
- B. Velocity: Normal Cruise.
- C. Course: Straight and level.

II. Interceptor Requirements

- A. Altitude: Approximately 50,000 ft.
- B. Velocity: Supersonic.
- C. Engine Mode: Afterburning.
- D. Initiation of Run: At least 30 miles aft of test bed.
- E. Course: Identical to and directly under that of the test bed.
- F. Termination of Run: Terminates as interceptor passes under the test bed.

III. Number of Sorties Required by Aircraft Type

- A. Three (3) 104's.
- B. Three (3) 106's.
- C. Three (3) other types i.e, F-4, F-101 or F-111.

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Sortie Number: AB-3B

I. Test Bed Requirements

- A. Altitude: approximately 70,000 ft.
- B. Velocity: normal cruise.
- C. Course: straight and level.

II. Interceptor Requirements

- A. Altitude: approximately 50,000 ft.
- B. Velocity: supersonic.
- C. Engine mode: afterburning.
- D. Initiation of run: approximately 10 miles aft of test bed with 15 mile offset.
- E. Course: test bed course plus (+) or minus (-) 90 degrees.
- F. Termination of run: termination to be determined during test.

III. Number of Sorties Required by Aircraft Type

- A. Two (2) F-106's
- B. Two (2) other type i.e., F-4, F-101, F-111

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Sortie Number AB-5B

I. Test Bed Requirements

- A. Altitude: approximately 70,000 ft.
- B. Velocity: normal cruise.
- C. Course: straight and level.

II. Interceptor Requirements

- A. Altitude: Approximately 50,000 ft.
- B. Velocity: Supersonic.
- C. Engine Mode: Afterburning.
- D. Initiation of run: Two (2) aircraft at least 30 nautical miles aft of test bed separated (wing to wing by four (4) nautical miles.
- E. Course: Each aircraft will be offset two (2) nautical miles on each side of the test bed course and parallel to that course.
- F. Termination of run: Run will be terminated when interceptor pass the 90° beam of the test bed aircraft.

III. Number of Sorties Required by Aircraft Type

- A. Two (2) Sorties of Two (2) each F-104's.
- B. Two (2) Sorties of Two (2) each F-106's.
- C. Two (2) Sorties of Two (2) each other type aircraft.

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Sortie Number: AB-2B

I. Test Bed Requirements

- A. Altitude: approximately 70,000 ft.
- B. Velocity: normal cruise.
- C. Course: straight and level.

II. Interceptor Requirements

- A. Altitude: approximately 50,000 ft.
- B. Velocity: supersonic.
- C. Engine mode: afterburning.
- D. Initiation of run: directly under test bed.
- E. Course: test bed course plus (+) 180 degrees.
- F. Termination of run: to be determined during run.

III. Number of Sorties Required by Aircraft Type

- A. Three (3) F-104's
- B. Three (3) F-106's
- C. Three (3) other type i.e., F-4, F-101, or F-111.

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Sortie Number AB-1C

I. Test Bed Requirements

- A. Altitude: approximately 70,000 ft.
- B. Velocity: normal cruise.
- C. Course: straight and level.

II. Interceptor Requirements

- A. Altitude: Co-altitude with test bed aircraft  
(approximately 70,000 ft.)
- B. Velocity: supersonic.
- C. Engine Mode: afterburning.
- D. Initiation of run: at least 30 miles aft of test bed.
- E. Course: Identical to that of test bed aircraft.
- F. Termination of run: Terminate as interceptor passes  
under test bed.

III. Number of Sorties Required by Aircraft Type.

- A. Two (2) F-104's.

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Sortie Number : AB-2C

I. Test Bed Requirements

- A. Altitude: Approximately 70,000 ft.
- B. Velocity: Normal Cruise.
- C. Course: Straight and level.

II. Interceptor Requirements

- A. Altitude: Commensurate for optimum attach in a plus (+) or minus (-) 40 degree sector of the test bed aircraft.
- B. Velocity: Supersonic.
- C. Engine Mode: Afterburning.
- D. Initiation of Run: As required.
- E. Course: Power climb into plus (+) or minus (-) 40 degrees aft sector of test bed.
- F. Termination of run: As required due to capabilities of interceptor or when interceptor passes test bed aircraft.

III. Number of Sorties Required by Aircraft Type

- A. Six (6) F-104's
- B. Six (6) F-106s
- C. Three (3) other type i.e., F-4, F-101, or F-111.

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Sortie Number AB-3C

I. Test Bed Requirements

- A. Altitude: Approximately 70,000 ft.
- B. Velocity: Normal Cruise.
- C. Course: Straight and level.

II. Interceptor Requirements

- A. Altitude: "Overshoot" test bed altitude by 3,000 to 6,000 feet.
- B. Velocity: Supersonic.
- C. Engine Mode: Afterburning.
- D. Initiation of run: As required.
- E. Course: Power climb into plus (+) or minus (-) 40 degrees aft sector of test bed.
- F. Termination of run: As required due to capabilities of interceptor or when interceptor passes test bed aircraft.

III. Number of Sorties Required by Aircraft Type

- A. Two (2) F-104's

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Sortie Number: AB-4C

I. Test Bed Requirements

- A. Altitude: Approximately 70,000 ft.
- B. Velocity: Normal Cruise.
- C. Course: straight and level.

II. Interceptor Requirements

- A. Altitude: Commensurate for optimum attack in a plus (+) or minus (-) 40 degree sector of the test bed aircraft.
- B. Velocity: supersonic.
- C. Engine Mode: afterburning.
- D. Initiation of run: Two (2) aircraft will be separated (wing to wing) by four(4) nautical miles.
- E. Course: Power climb for each aircraft in the described position and envelope.
- F. Termination of run: Run will be terminated when interceptor passes the 90° beam of the test bed aircraft.

III. Number of Sorties Required by Aircraft Type

- A. Two (2) Sorties of Two (2) F-104's/